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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,601	02/28/2002	Sheng-feng Chung	38699-8001US	1962

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EXAMINER

BRINEY III, WALTER F

ART UNIT	PAPER NUMBER
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2644

DATE MAILED: 06/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

10/086,601

Applicant(s)

CHUNG, SHENG-FENG

Examiner

Walter F Briney III

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☒ Claim(s) 1-6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

The drawings are objected to because:

- I. Figure 1, element 130 is labeled as a "transmitter amplify." The examiner objects to this terminology and suggests rewriting it as a "transmitter amplifier."

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

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Claims 1-6 are objected to because of the following informalities:

Claim 1 recites the limitation "**a transmitter amplify**" in line 8 of the claim. However, amplify is a verb and does not present a physical limitation. For the purpose of this examination, the examiner assumes the limitation to be "**a transmitter amplifier.**"

Claims 2-6 are missing an article for the protection elements and filter elements therein. For the purpose of this examination, the examiner has inserted the appropriate article to clearly distinguish each limitation. The additions are listed below:

Claim 2: "**a current protector**"

Claim 3: "**a bias protector**"

Claim 4: "**a lightning protector**"

Claim 5: "**a high-voltage-to-low-voltage transformer**"

Claim 6: "**a three-level filter**"

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 1 recites the limitation "**the digital signal**" in line 5 of the claim.

Claim 1 recited the limitation "**said A/D converter**" in line 10 of the claim. There is insufficient antecedent basis for these limitations. For the purpose of this action, the examiner had replaced the definite articles (i.e. "said" and "the") of the above mentioned limitations with the indefinite article "an."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Price (US Patent 6,393,110) in view of PCMCIA press release (16 September 1997) and further in view of Nelson et al. (US Patent 6,404,393).

Claim 1 is limited to a **network interface card**. Price discloses a **DSP** (figure 3, element 376) **connected to said CardBus interface to process a digital signal; a D/A converter** (figure 3, element 372); **a transmitter amplifier** (figure 3, element 364) (figure 4, element U1); **a multi-level filter** (figure 4, elements C12, C7, C16) **connected to an A/D converter** (figure 3, element 372); **a protection circuit** (figure 4, element U1, see optical boundary) **coupled to said transmitter amplifier** (figure 4, element U1). Price discloses a terminal (figure 3, element 228) connected to the modem described above. These

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devices are interfaced by a data controller (figure 3, element 388); however, Price does not disclose the protocol for communication between the two devices. Price does mention that the terminal is a personal computer (column 4, lines 52-53), and that the modem is a PCMCIA card (column 5, lines 49-55). Therefore, Price anticipates all limitations of the claim with the exception of **a CardBus interface for digital signal processing and controlling information transmission**. A PCMCIA press release on 16 September 1997 discloses that CardBus is the new standard in PC-card peripherals. It benefits from greater speed than 16-bit PC-cards (PCMCIA press releases, pages 16-17) making it ideal for high-speed DSL. It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the PCMCIA card of Price using CardBus technology (i.e. CardBus interface) because CardBus is the industry standard and provides high-speed 32-bit access. Clearly, Price discloses connecting the modem of figure 3 to a telephone line (figure 3, element 230), however, there is no mention of how to connect the modem. Therefore, Price in view of the PCMCIA press release makes obvious all limitations of the claim with the exception of **a phone jack connected to said protection circuit for plugging a transmission line to communicate to outside**. Nelson teaches a PCMCIA card that connects with a DSL line through an RJ-11 connector (column 3, lines 44-55). It would have been obvious to one of ordinary skill in the art at the time of the invention to connect the modem of Price using an RJ-11 jack as taught by Nelson for the purpose of enabling a modular interconnection with a personal computer and a network.

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Claim 2 is limited to **the network interface card of claim 1**, as covered by Price in view of the PCMCIA press release and further in view of Nelson. Price discloses a line isolation facility (i.e. **said protection circuit**) (figure 3, element 362) that protects from lightning strikes (i.e. **includes a current protector**) (column 5, lines 30-45). Therefore, Price in view of the PCMCIA press release and further in view of Nelson makes obvious all limitations of the claim.

Claim 3 is limited to **the network interface card of claim 1**, as covered by Price in view of the PCMCIA press release and further in view of Nelson. Price discloses a line isolation facility (i.e. **said protection circuit**) (figure 3, element 362) that protects from lightning strikes (i.e. **includes a bias protector**) (column 5, lines 30-45). Therefore, Price in view of the PCMCIA press release and further in view of Nelson makes obvious all limitations of the claim.

Claim 4 is limited to **the network interface card of claim 1**, as covered by Price in view of the PCMCIA press release and further in view of Nelson. Price discloses a line isolation facility (i.e. **said protection circuit**) (figure 3, element 362) that protects from lightning strikes (i.e. **includes a lightning protector**) (column 5, lines 30-45). Therefore, Price in view of the PCMCIA press release and further in view of Nelson makes obvious all limitations of the claim.

Claim 6 is limited to **the network interface card of claim 1**, as covered by Price in view of the PCMCIA press release and further in view of Nelson. Price discloses three capacitors (i.e. **a three-level filter**) (figure 4, elements C12,

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C7, C16), which effectively block DC components from reaching the receive amp, and further the A/D converter. Therefore, Price in view of the PCMCIA press release and further in view of Nelson makes obvious all limitations of the claim.

Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anne (US Patent 6,603,808) in view of the PCMCIA press release and further in view of Nelson.

Claim 1 is limited to a **network interface card**. Anne discloses a **DSP** (figure 2, element 220); a **D/A converter** (figure 2, element DAC); a **transmitter amplifier** (figure 2, element 212); a **multi-level filter** (figure 2, elements 204, 200) **connected to an A/D converter** (figure 2, element 204); a **protection circuit** (figure 2, element 200) **coupled to said transmitter amplifier** (figure 2, element 212). Anne discloses a MAC interface (figure 2, element 224) connected to a personal computer (figure 1). These devices are interfaced by a PCMCIA port (figure 1, element 132), however, Anne does not disclose the protocol for communication between the two devices. Therefore, Anne anticipates all limitations of the claim with the exception of a **CardBus interface for digital signal processing and controlling information transmission**. A PCMCIA press release on 16 September 1997 discloses that CardBus is the new standard in PC-card peripherals. It benefits from greater speed than 16-bit PC-cards (PCMCIA press releases, pages 16-17) making it ideal for high-speed DSL. It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the PCMCIA card of Anne using CardBus technology (i.e. CardBus interface) because CardBus is the industry standard and provides

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high-speed 32-bit access. Clearly, Anne discloses connecting the modem of figure 3 to a telephone line (figure 3, element 230), however, there is no mention of how to connect the modem. Therefore, Price in view of the PCMCIA press release makes obvious all limitations of the claim with the exception of **a phone jack connected to said protection circuit for plugging a transmission line to communicate to outside**. Nelson teaches a PCMCIA card that connects with a DSL line through an RJ-11 connector (column 3, lines 44-55). It would have been obvious to one of ordinary skill in the art at the time of the invention to connect the modem of Anne using an RJ-11 jack as taught by Nelson for the purpose of enabling a modular interconnection with a personal computer and a network.

Claim 5 is limited to **the network interface card of claim 1**, as covered by Anne in view of the PCMCIA press release and further in view of Nelson. Anne discloses line-coupling magnetics (figure 2, element 200) **wherein said protection circuit includes a high-voltage-to-low-voltage transformer** (column 10, lines 55-65). Therefore, Anne in view of the PCMCIA press release and further in view of Nelson makes obvious all limitations of the claim.

Conclusion

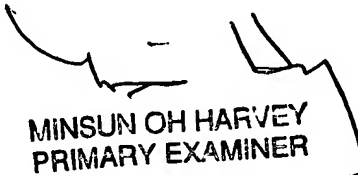
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter F Briney III whose telephone number is 703-305-0347. The examiner can normally be reached on M-F 8am - 4:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W Isen can be reached on 703-305-4386. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WFB
6/16/04


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PRIMARY EXAMINER